

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A method for determining the return path of a packet in a network, the network comprising a plurality of nodes and a plurality of links between the nodes, and wherein for each first node having at least one link with a second node, a link exists between the second node and the first node,

~~the method being used when comprising the steps of:~~

~~sending the packet from a source node to a destination node, via at least an intermediate node;~~

~~characterized in that the method comprises the step of storing information in the intermediate node for deriving the return path; and~~

~~when the packet is being returned to the source node, using the stored information for deriving the return path, wherein, the information stored in the intermediate node comprises an identifier of the packet and information that encodes an output port of the intermediate node to be used for returning the packet.~~

2. (Currently Amended) ~~A~~The method for determining the return path of a packet in a network ~~according to as claimed in claim 1,~~ characterized in that the ~~method further comprises steps~~step of storing information stores the information in each node visited by the packet for deriving the return path, when sending the packet from a source node to a destination node.

3. (Cancelled).

4. (Currently Amended) An integrated circuit, comprising a network, the network having a plurality of nodes and a plurality of links between the nodes, and wherein for each first node having at least one link with a second node, a link exists between the second node and the first node, the network being arranged to determine the return path of a packet when sending the packet from a source node to a destination node, via at least an intermediate node, characterized in that, the intermediate node is arranged to store information for deriving the return path,
wherein the information comprises an identifier of the packet and information that encodes an output port of the intermediate node to be used for returning the packet.

5. (Currently Amended) ~~An~~ The integrated circuit ~~according~~
~~as claimed in~~ claim 4, characterized in that each node of the plurality of nodes is arranged to store the information for deriving the return path.

6. (Cancelled).